

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 17, 2014

Ronald E. Hampton
Syngenta Crop Protection, LLC
PO Box 18300
Greensboro, NC 27419

Subject: HGW86 T & O Insect Control, EPA Reg. # 100-1544
convert to Syngenta label following product transfer
submitted 4/14/2014 as notification – rejected (D#490314)
revision submitted 6/17/2014 as amendment – accepted (D# 492185)

Dear Mr. Hampton:

This product was recently transferred from EPA Reg. # 352-863. A label notification was originally submitted on 4/14/2014 to convert the product label to a Syngenta product. As changes to the label notification were required, the notification was rejected and the revised label submitted on 6/17/2014 was tracked as a label amendment. The revised labeling referenced above submitted in connection with the registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is ACCEPTABLE.

Submit a copy of your final printed labeling incorporating the above changes prior to releasing your product for shipment. If this provision is not complied with the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A copy of the label stamped "accepted" is enclosed for your records. If you have any questions please contact Tom Harris at (703) 308-9423 or harris.thomas@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Meredith F. Laws".

Meredith F. Laws, Chief
Insecticide-Rodenticide Branch
Registration Division (7505P)
Office of Pesticide Programs
Date: June 17, 2014

Enclosure

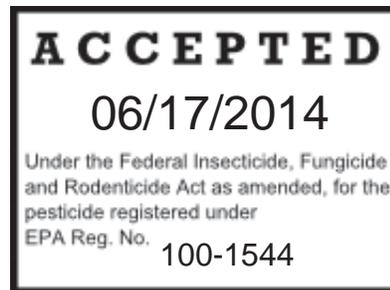
[Master Label]

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

GROUP 28 INSECTICIDE

HGW86 T&O INSECT CONTROL [ABN = FERENCE™ T&L]

Insecticide



For foliar and systemic control of white grubs and other listed pests infesting landscape and recreational turfgrass (including golf courses), sod farms, ornamental plants and interior plantscapes.

[Optional Claims]

1. [Provides quick knockdown and residual control]
2. [Taken up by the roots and protects plants from insect pests]
3. [Systemically moves through the plant]
4. [Systemically protects ornamental plants from labeled insect pests]
5. [Root absorbed, with systemic movement through plant]
6. [Low application rates]
7. [Controls multiple pests with one application]
8. [Single application controls white grubs, billbugs, and surface feeders [caterpillars]]
9. [Controls grubs, billbugs, and surface feeders [caterpillars] all with one application]
10. Effective control of labeled ornamental landscape insect pests on trees and shrubs
11. Protects ornamentals from Japanese beetle adults [and other pests]
12. Protects ornamentals from Japanese beetles and [leaf feeding] caterpillars
13. Flexible application method for ornamentals, can be foliar or soil applied
14. [Starts impacting labeled insect pests upon ingestion [contact]]

000100-01544.20140617.000100-01544.20140410.HGW86-T-O-Insect-Control.pdf

HHW86 T&O Insect Control (100-1544)

Active Ingredient:

Cyantraniliprole*

3-bromo-1-(3-chloro-2-pyridinyl)-N- [4-cyano-2-methyl-6-[(methylamino) carbonyl]phenyl]-1H-pyrazole-5-carboxamide 18.66%

Other Ingredients 81.34%

Total: 100.00%

HGW86 T&O Insect Control is a suspension concentrate.

This product contains 1.67 pounds of active ingredient per gallon.

*Cyantraniliprole belongs to the anthranilic diamide chemical class.

KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Reg. No. 100-1544

[EPA Est. No. placeholder]

[Net Contents placeholder]

Net Contents

[Refillable/Non-refillable Container]

FIRST AID

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

PRECAUTIONARY STATEMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.

After the product has been diluted in accordance with label directions for use, shirt, pants, socks, and shoes are sufficient Personal Protective Equipment (PPE). Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This pesticide is toxic to aquatic invertebrates. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. Do not make ground applications within 25 feet of lakes, rivers, reservoirs, permanent streams, marshes, natural ponds, estuaries or coastal areas. Do not cultivate within 25 feet of the aquatic area to allow growth of a vegetative filter strip. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Ground Water Advisory

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to:

www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at:

beekill@epa.gov

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

1. FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS



Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset.
- The application is made to the target site when temperatures are below 55°F.
- The application is made in accordance with a government-initiated public health response.
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.
- Unless otherwise stated for a specific crop or plant, do not apply a total of more than 0.4 lb ai/A of cyantraniliprole-containing products per year. This is the total from all application methods (eg. seed, soil, foliar).

NON-AGRICULTURAL USE SITES:



Do not apply HGW86 T & O insect control while bees are foraging. Do not apply HGW86 T & O insect control to plants that are flowering. Only apply after all flower petals have fallen off.

Read and understand the entire label before using this product. HGW86 T&O must be used in accordance with the directions of this label. Syngenta will not be responsible for losses or damages resulting from the use of this product in any manner not specifically stated on this label or other labels or bulletins published by Syngenta. User assumes all risks associated with such non-specified use.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms (sod farms included), forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment, restricted-entry interval, and notification to workers (as applicable).

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides, 40 CFR part 170. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Professional applications to golf courses, residential, industrial and commercial lawns and sports fields are not within the scope of the Worker Protection Standard. Do not enter or allow others to enter the treated area until sprays have dried

RESTRICTIONS

- Do not formulate this product into other end-use products without written permission from Syngenta Crop Protection, LLC.
- Do not use on plants being grown for sale or other commercial use (except sod farms); or for commercial seed production.
- Do not apply this product through any type of irrigation system.
- Do not apply this product with aerial application equipment.
- Do not apply this product in commercial nurseries and greenhouses.
- Do not apply more than 32 fluid ounces (equivalent to 0.4 lb of active ingredient) of product per acre per year in broadcast applications to turfgrass.
- Do not allow people and pets on treated area until treatment has dried.
- Wait a minimum of 7 days to retreat.
- Always shake container well before use.
- Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

PRODUCT INFORMATION

HGW86 T&O Insect Control is a suspension concentrate that may be applied for the control of white grubs, billbugs, annual bluegrass weevils and other listed pests infesting landscape and recreational turfgrass (including golf courses and sodfarms) as well as caterpillars and other pests of landscape ornamentals, including trees, shrubs, foliage plants and flowers.

HGW86 T&O Insect Control may be used on plants or turfgrasses that are being grown for aesthetic or recreational purposes or climatic modification in or around home lawns, residential dwellings, business and office complexes, shopping complexes, multi-family residential complexes, institutional buildings, airports, cemeteries, interior plantscapes, ornamental gardens, wildlife plantings, parks, playgrounds, schools, daycare facilities, golf courses (tee box areas, roughs, fairways, greens, collars etc.), athletic fields, other landscaped areas, nongrazed, non-cropped and uncultivated non-agricultural areas and sod farms. HGW86 T&O Insect Control may also be used on plants and turfgrass in and around small and large companion animal (including horses) boarding and exercising areas providing that the animals exposed to the treated areas are not used for human consumption.

HGW86 T&O Insect Control is in GROUP 28 of the EPA's Insecticide and Acaricide Groups Based on Target Site of Action (EPA PR Notice 2001-5) and may be used in rotational resistance management programs.

HGW86 T&O Insect Control must be diluted with water before application.

Consult your local Syngenta representative, Cooperative Extension Service specialist or pest control advisor for regionally specific information regarding application timing.

APPLICATION TIMING

White Grubs: Apply HGW86 T&O Insect Control from [April] [May] [June] to [early] September for preventative and early curative control of white grub species infesting turfgrass. The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. The higher rate listed for white grub control in Table 1 may be required in late August or [early] September when less sensitive mid- instar grubs are present at the time of application. Irrigate turf immediately after application or allow rainfall to move the product into the soil.

Annual Bluegrass Weevil: Apply HGW86 T&O Insect Control when overwintered adult annual bluegrass weevils are observed in late April or early May to prevent damage from first generation larvae in late-May and June. An application of HGW86 T&O Insect Control at this time will also provide white grub control.

Use HGW86 T&O Insect Control as part of a program to prevent turf damage from first generation annual bluegrass weevil larvae. Consult your local Syngenta representative, Cooperative Extension Service specialist or pest control advisor for the latest information on using HGW86 T&O Insect Control to control first generation annual bluegrass weevil larvae. The higher rates listed in Table 1 may be required for applications made after mid-May.

Billbugs: Apply HGW86 T&O Insect Control when overwintered adult billbugs are first observed. This will usually occur in late April or early May in regions with cool-season turf- grasses. An application of HGW86 T&O Insect Control at this time will also provide white grub control. The higher rates listed in Table 1 may be required for applications made after early May or when billbug species other than bluegrass billbug are present.

Chinch Bugs: For suppression of chinch bugs, apply HGW86 T&O Insect Control before eggs hatch.

European Crane Fly: Apply HGW86 T&O Insect Control between July and November to control the fall generation of European crane fly larvae in turfgrass. An application of HGW86 T&O Insect Control in early July will also provide excellent white grub control. The higher rate listed in Table 1 may be required to achieve control when applications are made in November.

Spittlebugs: HGW86 T&O Insect Control will provide control of two-lined spittlebug when applications are made in spring or summer.

Turf Caterpillars: HGW86 T&O Insect Control will provide excellent curative and residual caterpillar control in turfgrass. To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application.

When the area being treated is maintained at a mowing height of greater than one inch, then the higher rate listed in Table 1 may be required during periods of high pest pressure. HGW86 T&O Insect Control provides long term residual control of turfgrass infesting caterpillars and the duration of control increases with the application rate. For golf course green, tee and fairway applications, extend the treatment one boom length around the perimeter of the treated area to minimize subsequent movement of large caterpillars onto the treated area.

APPLICATION RATES FOR LAWNS, GOLF COURSES, OTHER RECREATIONAL TURFGRASS AREAS AND SOD FARMS

For maximum residual effectiveness or for optimal control of large pest infestations, apply HGW86 T&O Insect Control at up to 24 fluid ounces per acre (= 0.55 fluid ounces per 1,000 square feet or 0.313 lb AI/A) to control any of the pests listed below. Apply HGW86 T&O Insect Control in sufficient water to provide optimal distribution in the treated area (refer to Table 2). Use properly calibrated application equipment that will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift.

Restriction: Do not apply more than 32 fluid ounces (equivalent to 0.4 lb of active ingredient) of product per acre per year in broadcast applications to turfgrass.

APPLICATION RATES FOR ORNAMENTAL PLANTS (EXTERIOR LANDSCAPES AND INTERIOR PLANTSCAPES)

Foliar Applications:

HGW86 T&O Insect Control mixes readily with water and may be applied with many types of application equipment. Foliar treatment application rates are listed in Table 3. Mix the appropriate amount HGW86 T&O Insect Control with the required amount of water and apply as a full coverage foliar spray to control the selected target pest. Foliar applications offer locally systemic activity against insect pests. Repeat treatment as necessary to maintain control using higher application rates as pest pressure and foliage area increases. Repeat applications must be limited to no more than once per seven days. Certain plant species or cultivars may be sensitive to the final spray solution. If local experience is not available, then a small number of plants should be treated and observed for phytotoxicity for at least one week before making an application to the entire planting. When making foliar applications to hard-to-wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker is recommended. If

concentrate or mist type spray equipment is used, an equivalent amount of product should be used on the area sprayed, as would be used in a dilute application.

Restrictions

For outdoor landscape ornamentals, broadcast applications cannot exceed a total of 32 fluid ounces (equivalent to 0.4 lb of active ingredient) of product per acre per year.

Soil Applications:

HGW86 T&O Insect Control is a systemic product and will be translocated upward into the plant from root uptake. Soil treatment application rates are listed in Table 4. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. For this reason, basal application within one to three feet of the root flare of trees and shrubs is recommended.

Application can be made by soil injection, soil drenches and broadcast sprays. When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. Plant size, plant health, soil moisture level, environmental conditions, soil type, pest pressure, etc. all affect time for proper uptake. In some cases, this delay could be 60 days or longer. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control.

The calculations for soil injection/drench applications of HGW86 T&O Insect Control involve five easy steps:

- Step 1.** Calibrate the application equipment to determine its flow rate in gallons per minute.
- Step 2.** Select an injection volume per inch of tree diameter at breast height (DBH) or foot of shrub height.
- Step 3.** Refer to the Table 5 below to determine the amount of time that is required to deliver the desired volume per injection site. The example highlighted in Table 5 shows that 10 seconds are required per inch of tree DBH or foot of shrub height when injecting 1 quart of solution per site using a flow rate of 1.5 gallons per minute.
- Step 4.** Determine how much solution to mix.
- Step 5.** Refer to the Table 6 below to determine the amount of HGW86 T&O Insect Control that must be mixed in the desired volume of water based on the injection volume identified above.

Broadcast Applications to Flower Beds and Groundcovers:

HGW86 T&O Insect Control may be applied for white grub control in flower beds and ground- covers. Flower bed and groundcover application rates are listed in Table 7. Apply in sufficient water to uniformly cover the area being treated (a minimum of 2 gallons per 1,000 square feet is recommended for flower bed and groundcover applications). Irrigate immediately after application or allow rainfall to move the product into the soil. HGW86 T&O Insect Control may be applied to flower beds and groundcovers either before planting or after plants have been established.

Bark Applications:

Apply HGW86 T&O Insect Control to the trunks and lower branches of trees and shrubs to control clearwing moth borer larvae. Bark treatment application rates are listed in Table 8. Make applications after the emergence of adult moths and before their eggs hatch. Thorough coverage of the bark is required for satisfactory control. Adult emergence varies according to pest species, host tree, environmental conditions and geographic location. Consult your local Syngenta representative, Cooperative Extension Service specialist or pest control advisor for regionally specific information regarding application timing.

APPLICATION EQUIPMENT PREPARATION

Application equipment must be clean and free of previous pesticide deposits before mixing HGW86 T&O Insect Control.

Mixing Directions:

1. Use clean, well maintained and properly calibrated application equipment.
2. Fill sprayer tank 1/4 to 1/2 full of water.
3. Shake the container of HGW86 T&O Insect Control well before pouring.
4. Then add HGW86 T&O Insect Control directly to the sprayer tank.
5. Mix thoroughly to fully disperse the insecticide and continue agitation to keep the insecticide in suspension. Use mechanical or hydraulic agitation. Do not use air agitation.
6. It is recommended that the mixture not be stored in the spray or mix tank overnight.

Tank-mixtures:

HGW86 T&O Insect Control may be tank-mixed with other pesticides. When tank-mixing HGW86 T&O Insect Control with other pesticides, observe all precautions and limitations on each separate product label. Do not exceed label dosage rates. HGW86 T&O Insect Control may not be mixed with any product containing a label prohibition against such mixing. The physical compatibility of HGW86 T&O Insect Control will vary with different sources of pesticide products and local cultural practices. For a tank-mixture test, prepare on a small scale (pint or quart jar) using the proper proportions of pesticides and water to ensure the physical compatibility of the mixture. Always follow the tank mix instructions of the product label that is most restrictive.

Tank-mixing Sequence:

Add different formulation types in the sequence indicated below. Allow time for complete mixing and dispersion after the addition of each product.

1. Water soluble bags.
2. Water dispersible granules.
3. Wettable powders.
4. HGW86 T&O Insect Control and other water-based suspension concentrates.
5. Water soluble concentrates.
6. Oil-based suspension concentrates.
7. Emulsifiable concentrates.
8. Adjuvants, surfactants, oils.
9. Soluble fertilizers.
10. Drift retardants.

APPLICATION EQUIPMENT CLEANING

Prior to application, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all application equipment to reduce the risk of forming hardened deposits that might become difficult to remove. Drain application equipment. Thoroughly rinse application equipment and flush hoses, boom and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean equipment near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

Table 1: Turf Application Rates

Target Pest	HGW86 T&O Insect Control Turf Application Rates		
	Product per Acre	Product per 1,000 Sq Ft	lb A/A
Turf Caterpillars (including armyworms, cutworms and sod webworms)	2 to 16 fl oz	0.046 to 0.367 fl oz	0.026 to 0.208
White Grubs (including Aphodius spp., Asiatic garden beetle, black turfgrass ataenius*, European chafer, green June beetle, Japanese beetle, May/June beetles (Phyllophaga spp.), northern masked chafer, oriental beetle, southern masked chafer and sugarcane grub)	8 to 16 fl oz	0.184 to 0.367 fl oz	0.104 to 0.208
Annual bluegrass weevil	12 to 20 fl oz	0.275 to 0.459 fl oz	0.157 to 0.261
Billbugs	8 to 16 fl oz	0.184 to 0.459 fl oz	0.104 to 0.261
European Crane Fly	8 to 16 fl oz	0.184 to 0.367 fl oz	0.104 to 0.208
Spittlebugs	12 to 20 fl oz	0.275 to 0.459 fl oz	0.157 to 0.261
Chinch bugs (suppression only)	8 to 20 fl oz	0.184 to 0.459 fl oz	0.104 to 0.261

* Applications targeting black turfgrass ataenius larvae should be applied before the eggs of the first generation hatch. In most areas, applications should be made during April and May to ensure control of the first generation larvae. This application will control both first and second generation black turfgrass ataenius larvae.

HHW86 T&O Insect Control (100-1544)

Table 2: Turf Application Dilution Chart

Application Volume (Gallons per 1,000 Sq Ft)	Turf Application Rates			Fluid ounces of HGW86 T&O insect control diluted to these volumes of finished spray			
	Product per Acre	Product per 1,000 Sq Ft	lb A/A	1 gallon	5 gallons	10 gallons	100 gallons
1	1 fl oz	0.023 fl oz	0.013	0.023	0.115	0.23	2.3
	2 fl oz	0.046 fl oz	0.026	0.046	0.23	0.46	4.6
	4 fl oz	0.092 fl oz	0.052	0.092	0.46	0.92	9.2
	8 fl oz	0.184 fl oz	0.104	0.184	0.92	1.84	18.4
	16 fl oz	0.367 fl oz	0.208	0.367	1.84	3.67	36.7
	20 fl oz	0.46 fl oz	0.26	0.46	2.3	4.6	46.0
	24 fl oz	0.55 fl oz	0.313	0.55	2.76	5.5	55.0
2	1 fl oz	0.023 fl oz	0.013	0.0115	0.058	0.115	1.15
	2 fl oz	0.046 fl oz	0.026	0.023	0.115	0.23	2.3
	4 fl oz	0.092 fl oz	0.052	0.046	0.23	0.46	4.6
	8 fl oz	0.184 fl oz	0.104	0.092	0.46	0.92	9.2
	16 fl oz	0.367 fl oz	0.208	0.184	0.92	1.84	18.4
	20 fl oz	0.46 fl oz	0.26	0.23	1.15	2.3	23.0
	24 fl oz	0.55 fl oz	0.313	0.275	1.38	2.75	27.5
3	1 fl oz	0.023 fl oz	0.013	0.0077	0.039	0.077	0.77
	2 fl oz	0.046 fl oz	0.026	0.015	0.077	0.15	1.5
	4 fl oz	0.092 fl oz	0.052	0.03	0.154	0.3	3.0
	8 fl oz	0.184 fl oz	0.104	0.06	0.308	0.6	6.0
	16 fl oz	0.367 fl oz	0.208	0.123	0.616	1.23	12.3
	20 fl oz	0.46 fl oz	0.26	0.153	0.77	1.53	15.3
	24 fl oz	0.55 fl oz	0.313	0.184	0.92	1.84	18.4
4	1 fl oz	0.023 fl oz	0.013	0.0058	0.029	0.058	0.58
	2 fl oz	0.046 fl oz	0.026	0.0115	0.058	0.115	1.15
	4 fl oz	0.092 fl oz	0.052	0.023	0.116	0.23	2.3
	8 fl oz	0.184 fl oz	0.104	0.046	0.23	0.46	4.6
	16 fl oz	0.367 fl oz	0.208	0.092	0.46	0.92	9.2
	20 fl oz	0.46 fl oz	0.26	0.115	0.58	1.15	11.5
	24 fl oz	0.55 fl oz	0.313	0.138	0.7	1.38	13.8

HHW86 T&O Insect Control (100-1544)

5	1 fl oz	0.023 fl oz	0.013	0.0046	0.023	0.046	0.46
	2 fl oz	0.046 fl oz	0.026	0.0092	0.046	0.092	0.92
	4 fl oz	0.092 fl oz	0.052	0.0184	0.092	0.184	1.84
	8 fl oz	0.184 fl oz	0.104	0.037	0.184	0.37	3.7
	16 fl oz	0.367 fl oz	0.208	0.074	0.368	0.74	7.4
	20 fl oz	0.46 fl oz	0.26	0.092	0.46	0.92	9.2
	24 fl oz	0.55 fl oz	0.313	0.11	0.55	1.1	11.0
10	1 fl oz	0.023 fl oz	0.013	0.0023	0.0115	0.023	0.23
	2 fl oz	0.046 fl oz	0.026	0.0046	0.023	0.046	0.46
	4 fl oz	0.092 fl oz	0.052	0.0092	0.046	0.092	0.92
	8 fl oz	0.184 fl oz	0.104	0.0184	0.092	0.184	1.84
	16 fl oz	0.367 fl oz	0.208	0.0367	0.184	0.367	3.67
	20 fl oz	0.46 fl oz	0.26	0.046	0.23	0.46	4.6
	24 fl oz	0.55 fl oz	0.313	0.055	0.276	0.55	5.5

- To convert from fluid ounces to milliliters, multiply by 29.57.
- 1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons.
- Do not use household utensils to measure HGW86 T&O Insect Control.

Table 3: Foliar Ornamental Application Rates

HGW86 T&O Insect Control Ornamental Foliar Application Rates					
Target Pests	Product per 100 Gallons	lb AI per 100 Gallons	PPM	Percent AI (wt/vol)	Maximum Gallons per Acre per Year
Lace bugs, leaf-feeding caterpillars (such as fall webworms, gypsy moths, redbud leaffolders), soft scales (such as oak lecanium scales), thrips and whiteflies	1.0 fl oz	0.013	15.6	0.00156	3,200
	2.0 fl oz	0.026	31.3	0.00313	1,600
	4.0 fl oz	0.052	62.5	0.0625	800
	8.0 fl oz	0.104	125	0.0125	400
Japanese beetle adults and other leaf-feeding beetles (such as viburnum leaf beetle larvae)	2.0 fl oz	0.026	31.3	0.00313	1,600
	4.0 fl oz	0.052	62.5	0.0625	800
	8.0 fl oz	0.104	125	0.0125	400
For maximum residual control of the pests listed above	16.0 fl oz	0.208	250	0.025	200

Table 4: Ornamental Soil Treatment Application Rates

Target Pests	Trees: Amount per inch of diameter (DBH)		Shrubs: Amount per foot of height	
	Product	AI	Product	AI
Aphids (such as spirea aphids), lace bugs, and soft scales (such as Magnolia scale)	0.125 fl oz	0.0016 lb	0.125 fl oz	0.0016 lb
	0.25 fl oz	0.0032 lb	0.25 fl oz	0.0032 lb
Adelgids (such as hemlock woolly adelgid), borers (such as beetle and caterpillar larvae), leaf-feeding caterpillars (such as redbud leaffolders and gypsy moths), leaf-feeding beetles (such as elm flea weevils and Japanese beetle adults), leafminers (such as birch leafminers and boxwood leafminers), plant bugs (such as honeylocust plant bugs), psyllids (such as boxwood psyllid) and whiteflies	0.25 fl oz	0.0032 lb	0.25 fl oz	0.0032 lb

Table 5: Ornamental Soil Treatment Application Calibration Chart

Volume per Site*	Flow Rate (Gallons per minute)					
	0.5 gallon	0.75 gallon	1 gallon	1.5 gallons	2 gallons	3 gallons
1 pint	15 sec	10 sec	7.5 sec	5 sec	3.75 sec	2.5 sec
1 quart	30 sec	20 sec	15 sec	10 sec	7.5 sec	5 sec
2 quarts	1 min	40 sec	30 sec	20 sec	15 sec	10 sec
1 gallon	2 min	1 min 20 sec	1 min	40 sec	30 sec	20 sec

*Site = Soil injection site—the selected volume is applied per inch of tree DBH or foot of shrub height.

Table 6: Ornamental Soil Treatment Application Mixing Chart

Volume per Site*	Application Rate per Inch or Foot	Product per 100 Gallons	Product per 50 Gallons	Product per 25 Gallons	Product per 10 Gallons	Product per 1 Gallon
1 pint	0.125 fl oz	100 fl oz	50 fl oz	25 fl oz	10 fl oz	1 fl oz
	0.25 fl oz	200 fl oz	100 fl oz	50 fl oz	20 fl oz	2 fl oz
1 quart	0.125 fl oz	50 fl oz	25 fl oz	12.5 fl oz	5 fl oz	0.5 fl oz
	0.25 fl oz	100 fl oz	50 fl oz	25 fl oz	10 fl oz	1 fl oz
2 quarts	0.125 fl oz	25 fl oz	12.5 fl oz	6.25 fl oz	2.5 fl oz	0.25 fl oz
	0.25 fl oz	100 fl oz	50 fl oz	25 fl oz	10 fl oz	1 fl oz
1 gallon	0.125 fl oz	12.5 fl oz	6.25 fl oz	3.125 fl oz	1.25 fl oz	0.125 fl oz
	0.25 fl oz	25 fl oz	12.5 fl oz	6.25 fl oz	2.5 fl oz	0.25 fl oz

*Site = Soil injection site—the selected volume is applied per inch of tree DBH or foot of shrub height.

Table 7: Ornamental Flowers and Groundcovers Soil Treatment Application Rates

Target Pest	Product per Acre	Product per 1,000 Sq Ft	lb AI/A
White Grubs (including Aphodius spp., Asiatic garden beetle, black turfgrass ataenius*, European chafer, green June beetle, Japanese beetle, May/June beetles (Phyllophaga spp.), northern masked chafer, oriental beetle, southern masked chafer) and sugarcane grub	8 to 16 fl oz	0.184–0.367 fl oz	0.104–0.208

*Applications targeting black turfgrass ataenius larvae should be applied before the eggs of the first generation hatch. In most areas, applications should be made during April and May to ensure control of the first generation larvae. This application will control both first and second generation black turfgrass ataenius larvae.

Table 8: Ornamental Bark Treatment Application Rates

Target Pests	Product per 100 Gallons	lb AI per 100 Gallons	PPM	Percent AI (wt/vol)
Clearwing Borers, including peachtree borer	4 fl oz	0.052	62.5	0.00625
	8 fl oz	0.104	125	0.0125
	16 fl oz	0.208	250	0.025
For maximum residual control of the pests listed above.	32 fl oz	0.416	500	0.05

INTEGRATED PEST MANAGEMENT (IPM) PROGRAMS

HGW86 T&O Insect Control is recommended for IPM programs on turf and landscape ornamentals because it does not directly impact natural arthropod predator and parasitoid populations including ladybird beetles, lacewings, minute pirate bugs and predatory mites. The feeding behavior of predatory beneficial arthropods will aid in extending natural control of other insect and mite pests and will reduce the possibility of secondary pest outbreaks. HGW86 T&O Insect Control will reduce the target pest species that may serve as a food source for beneficial arthropods. If HGW86 T&O Insect Control is tank-mixed with an insect control product that negatively impacts beneficial arthropods, then the full benefit of HGW86 T&O Insect Control to the IPM program may not be realized.

RESISTANCE MANAGEMENT

Some insects are known to develop resistance to products used repeatedly for control. When this occurs, the labeled dosages fail to suppress the pest population below threshold levels. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of active classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local Syngenta representative, Cooperative Extension Service specialist or pest control advisor for the latest information on resistance management in your area.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Do not subject to temperatures below 32 degrees F. Store product in original container only in a location inaccessible to children and pets. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not for use or storage in or around the home.

Pesticide Disposal

Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling

[Nonrefillable rigid plastic and metal containers equal to or less than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Nonrefillable rigid plastic and metal containers greater than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or

reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Nonrefillable rigid plastic and metal containers too large to be tipped, rolled or turned upside down] Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[For all refillable containers] Refillable container. Refilling Container: Refill this container with HGW86 T&O Insect Control containing cyantraniliprole only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use container, contact Syngenta at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact Syngenta at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if

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revised 6/17/2014